LETTER TO THE EDITOR

A note on the keeping quality of babul liquor

Tanners find the sludge formation a very serious problem in tanneries. It is reported that 50-80° Bk seemed to be the most favourable strength for the deposition of sludge in the case of wattle.[1] It was found that 10° Bk goran liquors gave rise to negligible amount of sludge even after a period of 4 weeks' exposure[2]. In the present work, experiments have been conducted with babul liquors of different concentrations to find out the optimum conditions for minimum sludge formation.

Experimental

Preparation of babul aqueous infusion

A 60° Bk babul liquor was made by the counter-current technique. One part of well crushed babul bark was extracted with three times the weight of tap water at room temperature for 18 hours. Next day, the liquor was transferred to fresh babul bark, till a 60-70° Bk liquor was obtained following the same process. The liquor was centrifuged after filtering through cotton and then subjected to vacuum distillation to get a liquor of 200°Bk. Three sets of liquors with 120, 60 and 30° Bk strength were prepared using cold water to dilute them to the desired strength. 120° Bk liquor was prepared by diluting 120 ml. of 200° Bk solution and made to 200 ml. with water. 60° Bk and 30° Bk liquors were made by diluting the 120° Bk liquor twice and four times respectively. 100 ml. of each of the solutions was taken in narrow bottles closed with rubber stoppers for exposure studies. 10 ml. from each set was

Table 1

EFFECT OF AGEING OF BABUL LIQUOR ON TOTAL SOLUBLES

	Total solubles (g.) present in 100 ml. liquor			
	200°Bk	120°Bk	60°Bk	30°Bk
Initially present	48·38	29·03	14·50	7·26
After one week ageing	47·96	28·30	13·57	6·50
% loss of total solubles	0·87	2·50	6·50	10·50
After two weeks ageing	47·78	27·98	13·36	6·30
% loss of total solubles	1·20	3·60	7·90	13·20
After three weeks ageing	47·42	27·58	13·25	6·24
% loss of total solubles	2·10	5·0	8·90	14·10

taken, diluted 100, 60, 30 and 15 times respectively; 50 ml. of the diluted solution was evaporated to dryness.

Total solubles were determined for a period of three weeks analysing the liquors once a week. The percentage loss in total solubles i.e., sludge produced during the exposure was calculated. Care was taken to add water in the above experiments to make them to the same volume in order to avoid the loss due to evaporation in course of exposure. The results are given in Table 1.

Discussion

Even after the exposure for three weeks, a loss of only 2% total solubles is observed in highly concentrated (200° Bk) liquors. More and more loss is experienced as the liquor is diluted. Within a week of ageing maximum loss in total solubles occurs. About 14% total solubles is thrown as sludge in a period of three weeks. It was observed in case of wattle[1] and goran[2] that liquors of higher Bk strength showed the greatest tendency to sludge formation. But in the case of babul the observation was just the reverse.

The above results indicate that highly concentrated liquors of babul may be stored for a period of 5-6 weeks without much sediment formation (loss of tannins). Hence in tanneries babul liquors of very high strength may be prepared and stored. They may be diluted to the desired strength prior to their use in tanning.

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